Stuttgarter Beiträge zur Naturkunde
Serie A (Biologie)

Herausgeber:

Staatliches Museum für Naturkunde, Rosenstein 1, D-70191 Stuttgart

Stuttgarter Beitr. Naturk.	Ser. A	Nr. 669	26 S., 14 Abb., 4 Tab.	Stuttgart, 9. XII. 2004

Revision of the genus *Rhabdoblennius* Whitley (Pisces: Blenniidae: Salariinae), with descriptions of two new species

Hans Bath

Abstract

The genus *Rhabdoblennius* was established by Whitley (1930) for *Blennius rhabdotrachelus* Fowler & Ball, 1924; it now also includes the nominal species *Blennius nitidus* Günther, 1861, *Blennius ellipes* Jordan & Starks, 1906, *Blennius snowi* Fowler, 1928 and *Salarias walensis* Herre, 1935. *Blennius ellipes* is a junior synonym of *Rhabdoblennius nitidus*, *Salarias walensis* is a junior synonym of *Rhabdoblennius snowi*. The species of *Rhabdoblennius* are mainly distinguished by their head and body colour patterns. They are allopatric, restricted to the western and central Pacific Ocean. In addition to three valid species (*R. nitidus* from southern Japan to Taiwan, Philippines and Malaysia; *R. rhabdotrachelus* from the Mariana, Wake and Jarvis Islands to Tuamotu Archipelago and Pitcairn Group; *R. snowi* from the Marshall Islands, New Caledonia, Solomon Islands, Vanuatu and Samoa), two new species are described, *R. nigropunctatus* **n. sp.** from Tonga and Ono-i-Lau/Fiji, and *R. papuensis* **n. sp.** from Papua New Guinea.
Keywords: Blenniidae, revision, new species, Western Pacific, Central Pacific.

Zusammenfassung

Die Gattung *Rhabdoblennius* wurde von Whitley (1930) auf der Basis der Typusart *Blennius rhabdotrachelus* Fowler & Ball, 1924 beschrieben und schließt die nominellen Arten *Blennius nitidus* Günther, 1861, *Blennius ellipes* Jordan & Starks, 1906, *Blennius snowi* Fowler, 1928 und *Salarias walensis* Herre, 1935 ein. *Blennius ellipes* wird in der vorliegenden Arbeit als jüngeres Synonym von *Rhabdoblennius nitidus* beschrieben; *Salarias walensis* ist ein jüngeres Synonym von *Rhabdoblennius snowi*. Die Arten der Gattung *Rhabdoblennius* unterscheiden sich vor allem durch ihre Kopf- und Körperfärbung. Sie sind allopatrisch und leben im West- und Zentralpazifik. Zusätzlich zu drei gültigen Arten (*R. nitidus* aus Südjapan bis Taiwan, den Philippinen und Malaysia; *R. rhabdotrachelus* von den Marianen, der Wake- und Jarvis-Insel bis zum Tuamotu-Archipel und der Pitcairn-Gruppe; *R. snowi* von den Marshall-Inseln, Neukaledonien, den Salomon-Inseln, Vanuatu und Samoa) werden zwei weitere neue Arten beschrieben, *R. nigropunctatus* **n. sp.** aus Tonga und *R. papuensis* **n. sp.** aus Papua-Neuguinea.

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1 Introduction

The fishes of the family Blenniidae are a group of small, usually shallow water, scaleless fishes that are distributed worldwide in tropical and temperate seas. The family comprises about 420 species. Norman (1943) was the first to publish an infrafamilial classification of the Blenniidae including a synopsis of blenniid fish genera. Species of the family were grouped in three subfamilies, mainly on the basis of different types of dentition: Ophioblenniinae, Blenniinae, and Salariinae. Springer (1968) examined the osteology of the group, and distinguished two subfamilies (Nemophidinae and Blenniinae). He recognised three tribes within the Blenniinae (Blenniini, Omobranchini, Salariini). Springer (1968) defined the Blenniidae within the Blennioidei as possessing a reduced coracoid that is fused to the cleithrum, the interopercle anterior to the posterior end of the epihyal, and by the presence of a single row of close-set comb-like teeth anteriorly on the dentaries and premaxillaries. He defined the tribe Salariini (type genus *Salarias* Cuvier, 1816) as having the bases of comb-like teeth of premaxillaries and dentaries usually not closely and tightly joined to the bone, replacement teeth developing in an excavated area of the premaxillaries and dentaries (not completely surrounded by bones), posterior canines absent on premaxillaries, teeth on premaxillaries 30–250 (more than 100 in most genera), circumorbitals 5 (4 in two genera), and a number of additional characters. Springer & Smith-Vaniz (1972) erected another tribe, Phenablenniini; they also relegated the subfamily Nemophidinae as a tribe Nemophini. Smith-Vaniz (1976) recognised six major lineages within the family Blenniidae: Tribe Salariini; "Blenniini group"; species of the genus *Blennius*; Tribe Omobranchini; Tribe Phenablenniini; Tribe Nemophini. Bock & Zander (1986) erected a new tribe Parablenniini for the species of the "Blenniini-group". Bath (2001) synonymised the Parablenniini with the Salariini, and raised the previous tribes to subfamily level; within the family Blenniidae, he distinguished the four subfamilies Salariinae, Omobranchinae, Phenablenniinae, and Nemophinae.

The western and central Pacific genus *Rhabdoblennius* was originally described by Whitley (1930) for *Blennius rhabdotrachelus* Fowler & Ball, 1924. *Rhabdoblennius* was assigned to the blenniine tribe Salariini by Springer (1968) and Smith-Vaniz & Springer (1971). Bath (2001, 2002) assigned the genus to Group 2

of the blenniid subfamily Salariinae, characterised by a dentition intermediate between comb-like and incisoriform, and to Subgroup C, with premaxillaries consisting of an incomplete bony capsule without a closed bony cavity, the anterodorsal margins of the premaxillary protruding freely, functional teeth directly situated on the posteroventral premaxillary margin, dentaries consisting of a closed bony capsule, functional teeth of the dentaries situated dorsally on a tooth ridge, and replacement tooth foramina situated anteriorly on the base of the functional teeth. BATH (2001) described the dentition of *Rhabdoblennius ellipes* (Jordan & Starks, 1906), in detail.

Five nominal species of blenniid fishes have been described that can be assigned to the genus *Rhabdoblennius*, as listed by ESCHMEYER (1998): *Blennius ellipes* Jordan & Starks, 1906; *Blennius nitidus* Günther, 1861; *Blennius rhabdotrachelus* Fowler & Ball, 1924; *Blennius snowi* Fowler, 1928; *Salarias walensis* Herre, 1935. The genus is revised in the present paper, and two new species are described.

Acknowledgements

For supporting the present study, I would like to thank Dr. R. ARAI (National Science Museum, Tokyo, Japan), Dr. R. FRICKE (SMNS, Stuttgart), Dr. J. E. RANDALL (BPBM, Honolulu), and Dr. V. G. SPRINGER (USNM, Washington D. C.).

2 Methods and materials

2.1 Methods

Specimens are measured to the nearest 0.1 mm using a dial caliper. The standard length (**SL**) is measured from the anteriormost portion of the upper lip to the posterior margin of the central urostyle; the total length (**TL**) is measured from the tip of the upper lip to the tip of the longest caudal fin ray.

The sizes of the posterolateral caniniform teeth in the lower jaw is given as follows: **Small** teeth reach the lateral row of incisoriform teeth with their tip; **medium** teeth are twice as high as the lateral row of incisoriform teeth; **large** teeth are more than twice as high.

Photos were taken using a LEICA R4 camera in combination with a LEITZ reproduction device, using AGFAPAN APX 100 films. X-rays were provided by Dr. V. G. SPRINGER (USNM, Washington D. C.). When counting vertebrae, the number of caudal vertebrae including the urostyle is given.

The osteological nomenclature follows SPRINGER (1968) and BATH (2001). For dentition and head lateral line characters, the following abbreviations are used in the figure captions:

ASP	anterodorsal margin of the premaxillary
CTO	canine tooth
DE	dentary
FO	foramen through which replacement teeth grow outward
FT	functional teeth
MPP	mandibular part of the preoperculo-mandibular canal
PIP	posteroventral margin of the premaxillary
PM	premaxillary
pm	mandibular portion of preoperculo-mandibular canal
pom	preoperculo-mandibular canal
pp	preopercular portion of preoperculo-mandibular canal
PPS	ascending process of the premaxillary
RT	replacement teeth
TR	tooth ridge

2.2 Materials

Only the specimens examined in the present study are stated in the material lists. Specimens are deposited in the following collections:

BMNH The Natural History Museum [formerly British Museum (Natural History)], London, U. K.
BPBM Bernice P. Bishop Museum, Honolulu, Hawai'i, U. S. A.
FMNH Field Museum of Natural History, Chicago, Illinois, U. S. A.
MCZ Museum of Comparative Zoology, Harvard College, Cambridge, Massachusetts, U. S. A.
SB Sammlung BATH, Pirmasens, Germany
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
USNM National Museum of Natural History, Smithsonian Institution, Washington D. C., U. S. A.

3 Systematics

3.1 Genus *Rhabdoblennius* Whitley, 1930

Rhabdoblennius Whitley, 1930; WHITLEY 1930: 20 (type species: *Blennius rhabdotrachelus* Fowler & Ball, 1924, by original designation).
Nixiblennius Whitley, 1930; WHITLEY 1930: 20 (type species: *Blennius snowi* Fowler, 1928, by original designation, also monotypic).
Scartoblennius Fowler, 1946; FOWLER 1946: 174 (type species: *Blennius ellipes* Jordan & Starks, 1906, by original designation, also monotypic).

Diagnosis

Premaxillaries form an incomplete bony shell. Anterodorsal margin freely, roof-like protruding (Fig. 1). Posteroventral margin forming the base of the functional teeth; teeth are attached to bone by connective tissue (Fig. 2). Dentaries form an incomplete bony capsule. Anteroventral margin of dentary connected with posterodorsal margin by single narrow bony bridges. Large foramina for emission of replacement teeth between the bridges (Fig. 3). Bases of functional teeth connected to posterodorsal margin of dentary by connective tissue (Fig. 4). Teeth on upper jaw 36–58, teeth on lower jaw 20–44. Anterior dentary canines absent. Posterior dentary canines small to large. Vomerine teeth 2–4 (usually 2). Dorsal fin rays XII (rarely XI), 18–21; terminal dorsal fin ray connected to caudal peduncle by a membrane. Anal fin rays II, 19–23 (usually 20–21); terminal anal fin ray connected to caudal peduncle by a membrane. Dorsal and anal fin counts of species of *Rhabdoblennius* are compared in Tabs. 1–2. Segmented caudal fin rays 13, middle 9 rays branched. Terminal vertebra with 2 epurals, autogenous minimal hypural (= hypural 5), fused dorsal hypural plate (= hypurals 3+4), and autogenous ventral hypural plate (= parhypural + hypurals 3+4). Pectoral fin rays usually 14. Pelvic fin rays I,3, innermost ray closely bound over its entire length to middle ray. Lateral line not consisting of two overlapping disconnected portions; no scale-like flaps covering lateral line pores. Preoperculo-mandibular pores without cirri. Lateral line canal type E (Fig. 5). Mandibular part of the preoperculo-mandibular canal with 3–4 pores (Fig. 6). Mid-dorsal supratemporal pores 3–13 (see SPRINGER 1967: 6) (Fig. 7). Upper lip without free dorsal margin. No cup-shaped fleshy disk or appendage behind lower lip. Pectoral radial formula 2-0-2. Gill membranes free. Occipital crest absent. Nuchal cirri absent; supraorbital and nasal cirri simple. Postcleithra consisting of two elongate bones, head of ventral element overlapping ventral end of dorsal element. Lateral extrascapular not fused with pterotic. Median ethmoid ossified. Circumorbital bones 5. Caudal vertebrae 26–28 (Tab. 2).

Tab. 1. Frequency distribution for dorsal and anal fin rays in three species of *Rhabdoblennius*.

	Total dorsal fin elements							Segmented anal fin rays					
Species/locality/sex	29	30	31	32	33	34	mean	19	20	21	22	23	mean
	R. nitidus												
Chinese Sea syntypes	–	–	1	1	1	1	32.5	–	–	1	2	1	22.0
Ryukyu Islands													
males	–	1	11	6	–	–	31.3	–	3	12	3	–	21.0
females	–	3	13	6	–	–	31.1	–	7	14	1	–	20.3
Taiwan													
males	–	–	4	9	–	–	31.7	–	–	4	9	–	21.7
females	–	–	4	3	–	–	31.7	–	–	6	1	–	21.7
Philippines													
males	–	4	18	–	–	–	30.8	–	9	13	–	–	20.6
females	–	1	8	–	–	–	31.0	–	4	6	–	–	20.6
Malaysia, Tioman Is.													
males	–	1	1	–	–	–	30.5	–	–	2	–	–	21.0
females	–	–	2	–	–	–	31.0	–	–	2	–	–	21.0
	R. rhabdotrachelus												
Phoenix Islands													
males	–	4	11	–	–	–	30.7	–	1	12	2	–	21.1
females	–	3	3	–	–	–	30.5	–	3	3	–	–	20.5
Cook Islands													
males	–	2	1	–	–	–	30.3	–	1	2	–	–	20.7
Tuamotu Archipelago													
males	–	–	2	–	–	–	31.0	–	–	1	1	–	21.5
Mariana Islands													
males	–	4	11	–	–	–	30.7	–	6	8	1	–	20.7
females	–	4	6	–	–	–	30.6	–	4	6	–	–	20.6
	R. snowi												
Marshall Islands													
males	–	–	5	–	–	–	31.0	–	3	2	–	–	20.4
females	–	1	5	–	–	–	30.8	1	5	–	–	–	19.8
Baker Island													
males	–	–	1	–	–	–	31.0	–	1	–	–	–	20.0
females	–	1	1	–	–	–	30.5	–	2	–	–	–	20.0
Vanuatu													
males	–	–	7	–	–	–	31.0	–	–	7	–	–	21.0
females	–	–	4	–	–	–	31.0	–	–	4	–	–	21.0
Solomon Islands													
males	2	3	10	–	–	–	30.5	–	14	1	–	–	20.1
females	–	7	4	–	–	–	30.4	–	9	2	–	–	20.2
American Samoa													
males	1	7	7	–	–	–	30.4	–	10	5	–	–	20.3
females	2	6	7	–	–	–	30.3	1	13	1	–	–	20.0

Tab. 2. Frequency distribution for dorsal and anal fin rays and caudal vertebrae in four species of *Rhabdoblennius* based on X-ray radiographs.

		Total dorsal fin rays				Anal fin soft rays				Caudal vertebrae		
Region/ catalogue number	n	29	30	31	32	19	20	21	22	26	27	28
	R. nitidus											
Philippines, Batanes USNM 226772	1	–	1	–	–	1	–	–	–	1	–	–
	R. papuensis n. sp.											
Papua New Guinea USNM 226572	29	1	10	18	–	1	23	5	–	15	14	–
	R. rhabdotrachelus											
Mariana Islands USNM 124094	3	–	1	2	–	–	3	–	–	1	1	1
Jarvis Island USNM 293109	1	–	1	–	–	–	–	1	–	–	1	–
Tuamotu Arch. USNM 300400	2	–	–	2	–	–	–	1	1	–	–	2
	R. snowi											
Vanuatu USNM 315305	7	–	–	5	2	–	–	7	–	1	4	2
Vanuatu USNM 287461	1	–	–	1	–	–	1	–	–	–	1	–
Kiribati, Gilbert Islands USNM 167326	11	–	3	8	–	–	7	4	–	5	6	–

Distribution

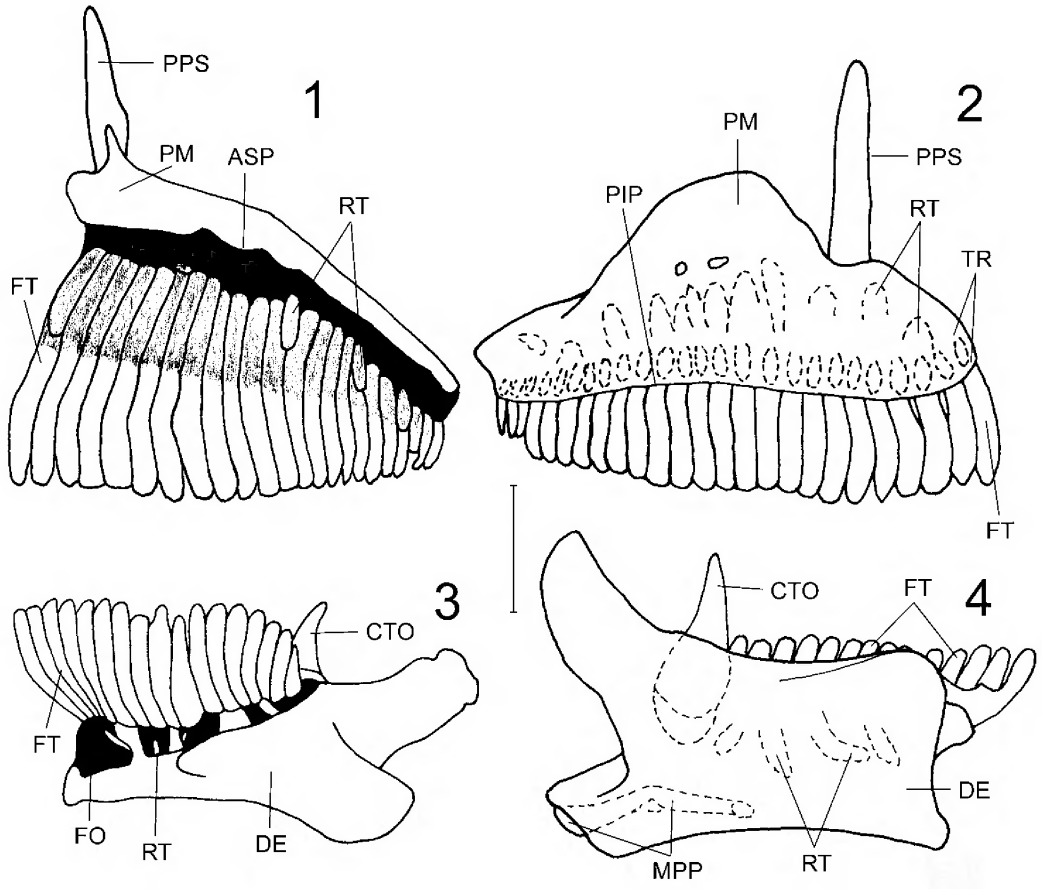
Western and central Pacific Ocean.

Remarks

WHITLEY (1930) proposed the generic name *Nixiblennius* for *Blennius snowi* on the same page as *Rhabdoblennius* for *B. rhabdotrachelus*, but gave no reasons for erecting the genera and no characters to separate them. Later, FOWLER (1946) proposed the genus *Scartoblennius* for *Blennius ellipes*, but did not compare it with either *Rhabdoblennius* or *Nixiblennius*. NORMAN (1943) first placed *Nixiblennius* in synonymy with *Rhabdoblennius*. SCHULTZ & CHAPMAN (1960) first synonymised *Scartoblennius*.

According to SPRINGER (1968: 44), *Rhabdoblennius rhabdotrachelus* differs from the other species in possessing a pseudobasisphenoid. However, he believed this difference did not warrant the establishment of a monotypic genus for *R. rhabdotrachelus*.

The genus *Rhabdoblennius* is here revised on the basis of 357 specimens; a total of five species is now considered valid, including two new species.



Figs. 1–4. *Rhabdoblennius nitidus*, USNM 258312, female, 50.4 mm SL, Taiwan. – **1–2.** Left premaxillary; anterior side (1), posterior side (2). **3–4.** Left dentary; anterior side (3), posterior side (4). – Scale: 1 mm; abbreviations see chapter 2.1.

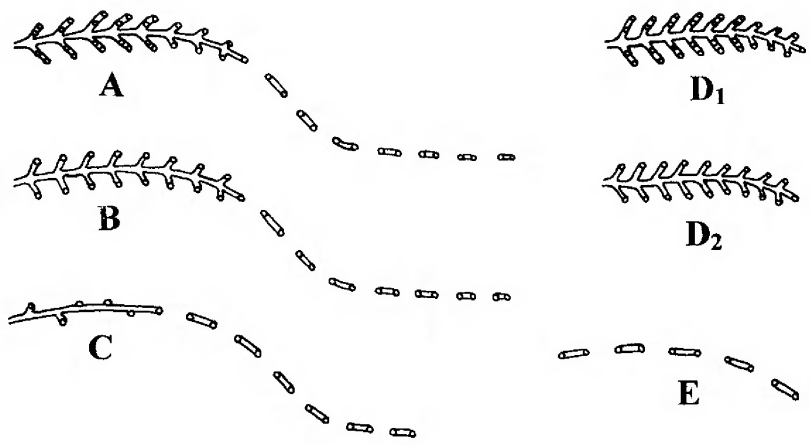


Fig. 5. Lateral line types in the family Blenniidae. – **Type A.** Lateral line anteriorly with paired branches, each with 2–9 pores; posterior part consisting of short tubes. – **Type B.** Lateral line anteriorly with paired branches, each with 1 pore; posterior part consisting of short tubes. – **Type C.** Lateral line anteriorly without paired branches; some pores on main canal; posterior part consisting of short tubes. – **Type D.** Lateral line anteriorly with paired branches, each with 2–3 pores (D_1) or 1 pore (D_2); no posterior tube section. – **Type E.** Lateral line consisting of few short tubes only.

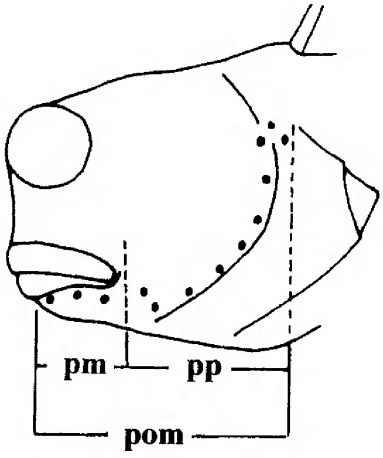


Fig. 6. Head lateral line system. – Abbreviations see chapter 2.1.

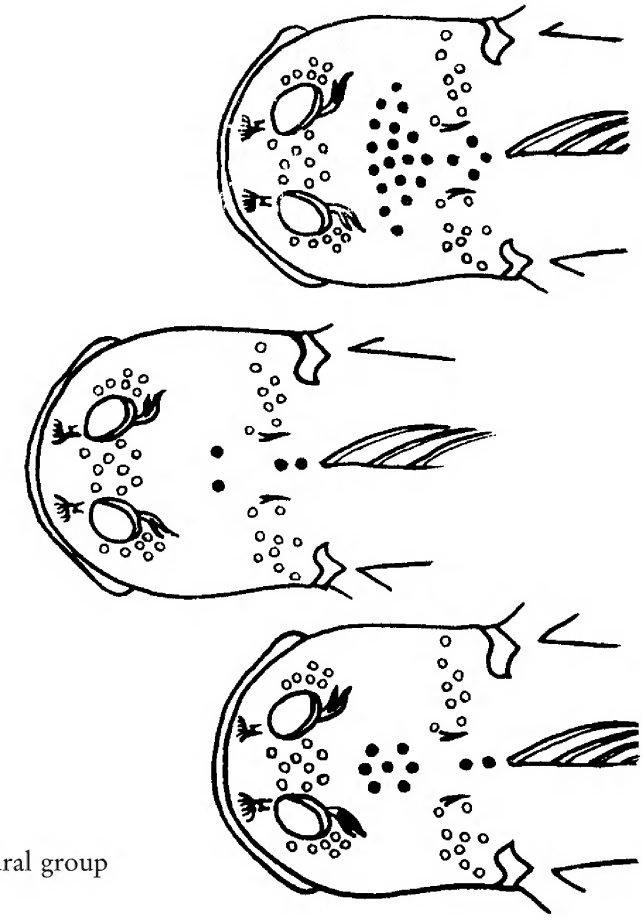


Fig. 7. Pores of predorsal commissural group (after SPRINGER 1967: 6).

3.2 Species of *Rhabdoblennius*

3.2.1 *Rhabdoblennius nigropunctatus* **n. sp.** (Figs. 8–9, Tab. 3)

Material

Total: 75 specimens.

Holotype. **Kingdom of Tonga**: USNM 335240, male, 44.6 mm SL; E'ua Island, Ha'aluma Beach on SW coast, 21°25′45″S 174°56′50″W, 0–3 feet depth, reef crest and tidal flat with brown and green algae in surge zone, scattered live coral; J. T. WILLIAMS, B. B. COLLETTE, G. D. JOHNSON, E. O. WILEY, D. G. SMITH, E. A. POWERS & M. A. MCCORMICK; 4 Nov. 1993.

Paratypes. **Kingdom of Tonga**: SMNS 23503, 1 male, 37.4 mm SL; same data as the holotype. – USNM 373498, 13 males (24.8–51.5 mm SL) and 11 females (20.2–52.0 mm SL); same data as the holotype.

Additional material. **Kingdom of Tonga**: BPBM 10834, 5 males (42.4–59.2 mm SL) and 5 females (34.8–55.6 mm SL); Tongatapu Island, near Houma Village, blowhole area; R. H. SNIDER; 16 Dec. 1964. – BPBM 10838, 4 males (22.3–46.4 mm SL) and 3 females (35.4–39.7 mm SL); Tongatapu Island, blowhole area; R. H. SNIDER; 13 Dec. 1964. – BPBM 10839, 18 males (21.0–51.8 mm SL) and 5 females (24.2–54.3 mm SL); Tongatapu Island, Monotapu Beach; R. H. SNIDER & P. BLOOMFIELD; 17 Dec. 1964. – BPBM 10840, 3 males (20.3–23.7 mm SL) and 1 female (25.2 mm SL); Tongatapu Island, blowhole area; R. H. SNIDER; 16 Dec. 1964. – BPBM 37989, 3 males (19.8–25.2 mm SL) and 1 female (26.7 mm SL), Tongatapu Island, middle of SW coast, Secret Cove Beach, tidepools in rough limestone at low tide; J. E. RANDALL & A. FRIEDLANDER; 6 Mar. 1983. — **Fiji**: USNM 236053, 1 female,

Tab. 3. *Rhabdoblennius nigropunctatus* n. sp.; measurements (in mm) and counts of the type series. – HT = holotype; PT = paratype; Eye = eye diameter; SO = supraorbital tentacle length.

Type status	Catalogue number	Sex	TL	SL	Head length	Eye	SO	D	A	P_1
HT	USNM 335240	Male	53.0	44.6	9.0	3.0	4.5	XII, 19	II, 21	14/14
PT	USNM 373498	Male	61.0	51.5	10.8	3.0	3.9	XII, 19	II, 21	14/14
PT	USNM 373498	Male	50.8	42.0	8.7	2.7	3.7	XII, 19	II, 21	14/14
PT	USNM 373498	Male	49.8	41.6	8.4	2.5	3.6	XII, 19	II, 20	14/14
PT	SMNS 23503	Male	45.1	37.4	8.6	2.5	3.3	XII, 19	II, 21	14/14
PT	USNM 373498	Male	45.0	37.5	8.6	2.4	4.9	XII, 19	II, 21	14/14
PT	USNM 373498	Male	44.0	37.5	8.0	2.4	3.5	XII, 19	II, 21	14/14
PT	USNM 373498	Male	41.8	36.7	7.6	2.5	4.2	XII, 19	II, 21	14/14
PT	USNM 373498	Male	41.3	36.0	7.5	2.4	3.0	XII, 19	II, 21	14/14
PT	USNM 373498	Male	37.4	32.0	7.5	2.5	2.6	XII, 20	II, 21	14/14
PT	USNM 373498	Male	36.5	31.0	7.4	2.2	3.4	XII, 19	II, 20	14/14
PT	USNM 373498	Female	62.3	52.0	11.0	3.1	2.4	XII, 19	II, 21	14/14
PT	USNM 373498	Female	55.6	48.5	9.5	3.1	3.1	XII, 19	II, 20	14/14
PT	USNM 373498	Female	51.8	44.5	9.0	2.6	2.4	XII, 19	II, 20	14/14
PT	USNM 373498	Female	51.7	43.1	9.0	2.7	3.8	XII, 20	II, 21	14/14
PT	USNM 373498	Female	45.5	37.6	9.0	2.9	2.2	XII, 19	II, 21	14/14
PT	USNM 373498	Female	45.0	38.7	8.2	2.8	2.6	XII, 20	II, 21	14/14
PT	USNM 373498	Female	44.4	37.0	8.4	2.5	2.1	XII, 20	II, 20	14/14
PT	USNM 373498	Female	42.2	36.0	8.0	2.6	2.8	XII, 19	II, 21	14/14
PT	USNM 373498	Female	33.3	28.0	6.7	3.0	2.0	XII, 19	II, 21	14/14

43.0 mm SL; Lau Group, Ono-i-Lau, Yanutha Islet, 20°37′S 178°40′W, 0–6 feet depth, tidal flat; V. G. SPRINGER et al.; 29 Apr. 1982.

Etymology

The name "*nigropunctatus*" refers to the round black blotches on the head and anterior half of body.

Diagnosis

A species of the genus *Rhabdoblennius* with (18-)19–20 segmented dorsal fin rays and 20–21(-22) segmented anal fin rays. Pelvic fin with 3 segmented rays. Supraorbital tentacle simple, fusiform. Head and anterior half of body with round black spots of varying sizes. Upper lip and anterior head with variable black spots or stripes.

Description

Premaxillary teeth 44–54, dentary teeth 26–40. Vomerine teeth 1–4 (usually 2). Terminal vertebra with 2 epurals and 1 small hypural, autogenous hypural 5 and ventral hypural plate.

Dorsal fin spines 12, segmented dorsal fin rays 18–20 [frequency distribution of 62 specimens: 18 (1 specimen), 19 (48 specimens), 20 (13 specimens)]. Dorsal fin deeply incised between spinous and soft portions (by one-third to half of its height). Anal fin spines 2, segmented rays 20–22 [frequency distribution of 62 specimens: 20 (10 specimens), 21 (50 specimens), 22 (2 specimens)]. Caudal fin with 13 segmented

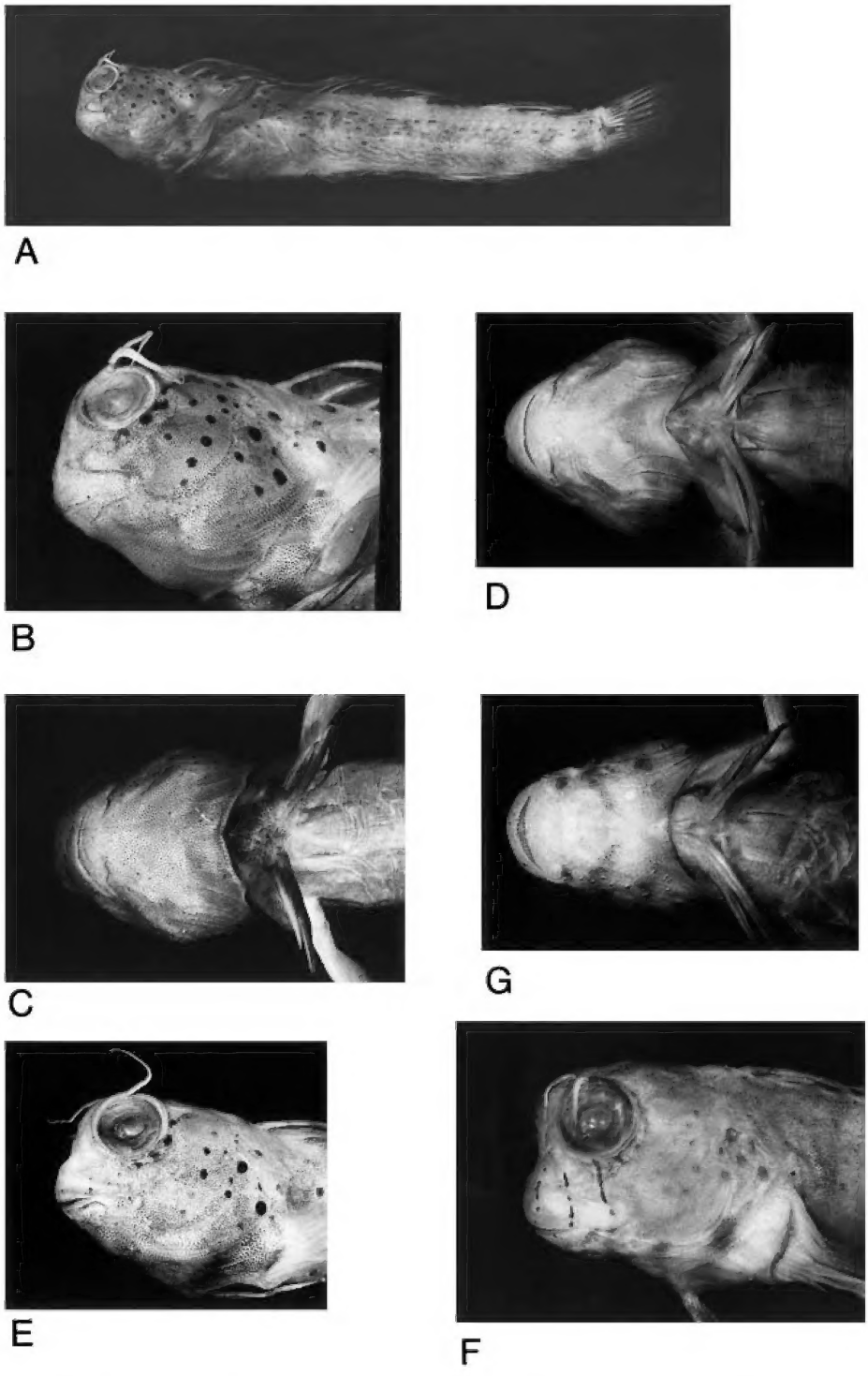


Fig. 8. *Rhabdoblennius nigropunctatus* n. sp. – **A–C**. Holotype, USNM 335240, male, 44.6 mm SL, Tonga. **A**. Lateral view. **B**. Head, lateral view. **C**. Head, ventral view. – **D**. BPBM 10839, female, 54.3 mm SL, Tonga. Head, ventral view. – **E**. Paratype, USNM 273498, female, 36.0 mm SL, Tonga. Head, lateral view. – **F–G**. USNM 236053, female, 43.0 mm SL, Fiji, Ono-i-Lau. **F**. Head, lateral view. **G**. Head, ventral view.

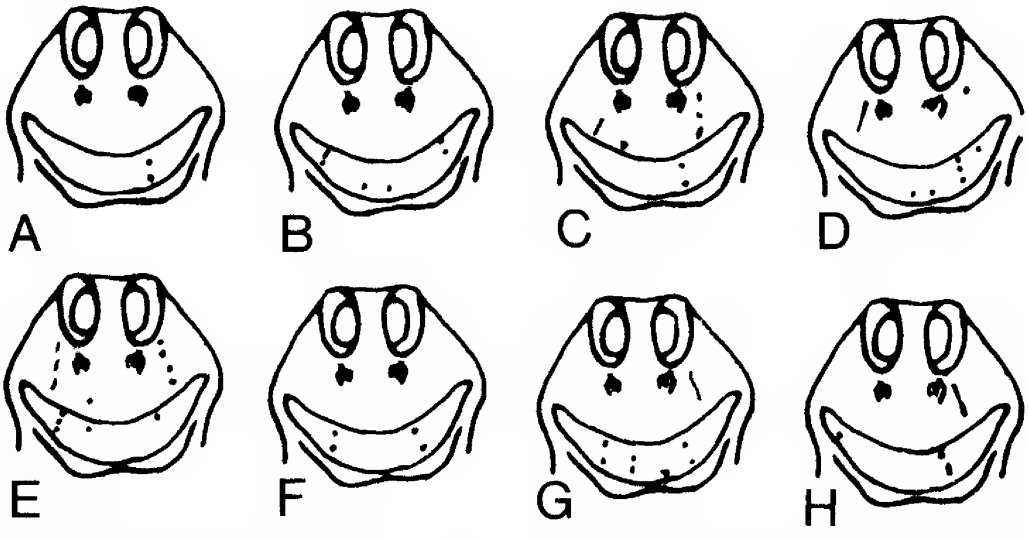


Fig. 9. *Rhabdoblennius nigropunctatus* n. sp., anterior head and upper lip: characteristic spots. – **A–E**. Paratypes, USNM 373498, Tonga. **A**. Male, 37.5 mm SL. **B**. Male, 31.0 mm SL. **C**. Male, 28.8 mm SL. **D**. Female, 30.2 mm SL. **E**. Female, 37.6 mm SL. – **F–G**. BPBM 10839, Tonga. **F**. Male, 39.5 mm SL. **G**. Male, 39.5 mm SL. – **H**. BPBM 37983, Tonga. Male, 25.5 mm SL.

rays, central 9 rays branched. Pectoral fin rays 14. Supraorbital cirrus in 45 specimens longer and in 12 specimens smaller than eye diameter. Mandibular part of the preoperculo-mandibular canal (Fig. 6) with 4 pores. Mid-dorsal supratemporal pores 2–5 (usually 3) (see Fig. 7). Lateral head canal with 70–77 pores (average of 15 specimens: 73.4).

Colour in alcohol: Head and body light brownish yellow. Head with large diffuse pigment cells. Sides of head with large, round blotches of irregular size, intensity and arrangement (Figs. 8B, 8E, 8F). Areas on anterior dorsal part of opercle, upper distal part of opercle and above the upper gill opening usually each with a large, dark blotch. Posterior cheeks usually with 4–7 faint blotches in slightly oblique arrangement. Additional blotches on posterior orbital rim and on the upper sides of the head (Figs. 8B, 8E, 8F). Both sides of upper lip with a varying number of small dark spots (Fig. 9); these spots may be arranged in vertical rows, especially in juveniles. Dorsal area above upper lip often with black spots or varying black stripes; these spots may also be absent or present on one side only. Corners of mouth often with a small area of densely arranged pigment cells. Lower sides of head with diffuse pigmentation (Figs. 8C, 8D, 8F, 8G). Central parts of throat often light. No straight or angular bands. Pectoral fin base light or with scattered dark pigmentation. Ventral half of pectoral fin ray bases with a dark, oblique pigmentation. Lateral side of the first segmented pelvic fin ray light, yellowish white. Median side of first pelvic fin ray as well as 2nd and 3rd rays with dark pigmentation. Pelvic fin base with dark pigmentation. Sides of body with a row of 7 large, dark blotches. Blotches dorsally with slightly lighter, broad streaks which are extending to the dorsal fin base (Fig. 8A). Smaller streaks extending to the anal fin base. Upper dorsal half of body with round to oval spots of different number, arrangement and intensity above the large dark blotches. A few specimens with fewer, smaller, oval spots with a light centre and a

dark margin on the ventral posterior side of the body. Membranes and rays of dorsal fin with black, confluent, irregular, oblique streaks extending between the basal bands and the distal margin of the fin. These streaks may form a horizontal band in the anterior half of the fin. Anal fin with diffuse, dark pigmentation, which is darker towards the tips of the fin rays. Caudal fin membranes dark, with 3 transverse rows of white, translucent spots.

Distribution

Fiji (Ono-i-Lau); Kingdom of Tonga (E'ua, Tongatapu) (Fig. 10).

3.2.2 *Rhabdoblennius nitidus* (Günther, 1861) (Fig. 11)

Blennius nitidus Günther, 1861; Günther 1861: 243 [China seas; syntypes: BMNH 1848.3.160.124–125 (2), BMNH 1855.9.19.712 (1)].

Blennius ellipes Jordan & Starks, 1906; Jordan & Starks 1906: 702–703 [Tanegashima/Tanega-shima, Japan; holotype: SU 9361; paratypes: SU 9778 (14), USNM 53272 (11), USNM 61164 (4)].

Material

Total: 96 specimens.

Pacific Ocean, China Seas: BMNH 1848.3.160.124–125, syntypes of *Blennius nitidus* Günther, 2 specimens, X-ray radiographs. – BMNH 1855.9.19.712, 1 specimen, X-ray radiograph. — **Japan, Ryukyu Islands**: SB uncat., 3 males (34.7–37.8 mm SL) and 2 females (32.5–33.0 mm SL); Ishigaki Island. – USNM 226571, 9 males (17.0–54.6 mm SL) and 6 females (29.8–46.7 mm SL); Okinawa Island, 1 mile N Sate; C. R. Johnson; 31 Oct. 1964. – USNM 293081, 4 males (39.4–44.2 mm SL) and 7 females (39.4–49.2 mm SL); Okinawa Island, 0.5 miles S of Komesu; C. R. Johnson; 9 Apr. 1965. – USNM 293102, 3 males (28.6–37.1 mm SL) and 7 females (30.8–46.0 mm SL); Okinawa Island, 1 mile N of Sate; C. R. Johnson; 23 Jan. 1965. — **Taiwan**: USNM 258312, 13 males (41.0–83.0 mm SL) and 7 females (43.0–56.0 mm SL); Green Island, 22°41′N 121°29′E, tide pool; H.-K. Mok et al.; 20 Aug. 1982. — **Philippines**: USNM 99390, 13 males (24.5–42.2 mm SL) and 7 females (28.3–38.0 mm SL); Luzon Island, Gubat Bay; RV 'Albatross'; 23 June 1909. – USNM 226715, 1 female, 43.0 mm SL; Batanes Province, Batan Island, off rocks at S end of island; W. Ballesteros; May 1977. – USNM 226737, 3 males, 37.7–54.8 mm SL; Mindoro Island, Puerto Galera tide pools and rock crevices; C. J. Ferraris, Jr., and Marine Zoology Class; 13–21 Apr. 1977. – USNM 226770, 3 males (35.0–45.6 mm SL) and 1 female (42.0 mm SL); Batanes Province, Batan Island, from rocks and tide pools on W side of island (Chanarian Beach) and rocks at S end; C. J. Ferraris, Jr.; Mar. 1977. — **Malaysia**: BPBM 21986, 2 males (23.9–30.8 mm SL) and 2 females (30.0–34.4 mm SL); South China Sea, Tioman Island, off Bunut, 0–1.5 m depth; J. E. Randall & S. Tay; 6 Aug. 1977.

Description

Premaxillaries form an incomplete bony shell, anterodorsal margin free. Posteroventral margin is the base of the functional teeth. The dentaries form an incomplete bony capsule. Anteroventral margin of dentary connected with posterodorsal margin by bony bridges (Figs. 1–4). Premaxillary teeth 44–58, dentary teeth 30–38. Vomerine teeth 2–4 (usually 2). Vertebrae 10 + 26–27.

Dorsal fin spines 12, segmented dorsal fin rays 18–22 [frequency distribution of 85 specimens: 18 (10 specimens), 19 (49 specimens), 20 (24 specimens), 21 (1 specimen), 22 (1 specimen)]. Dorsal fin deeply incised between spinous and rayed portions (two-thirds to half of length of first soft ray). Anal fin spines 2; segmented anal fin rays 19–23 [frequency distribution of 96 specimens: 19 (1 specimen), 20 (20 spec-

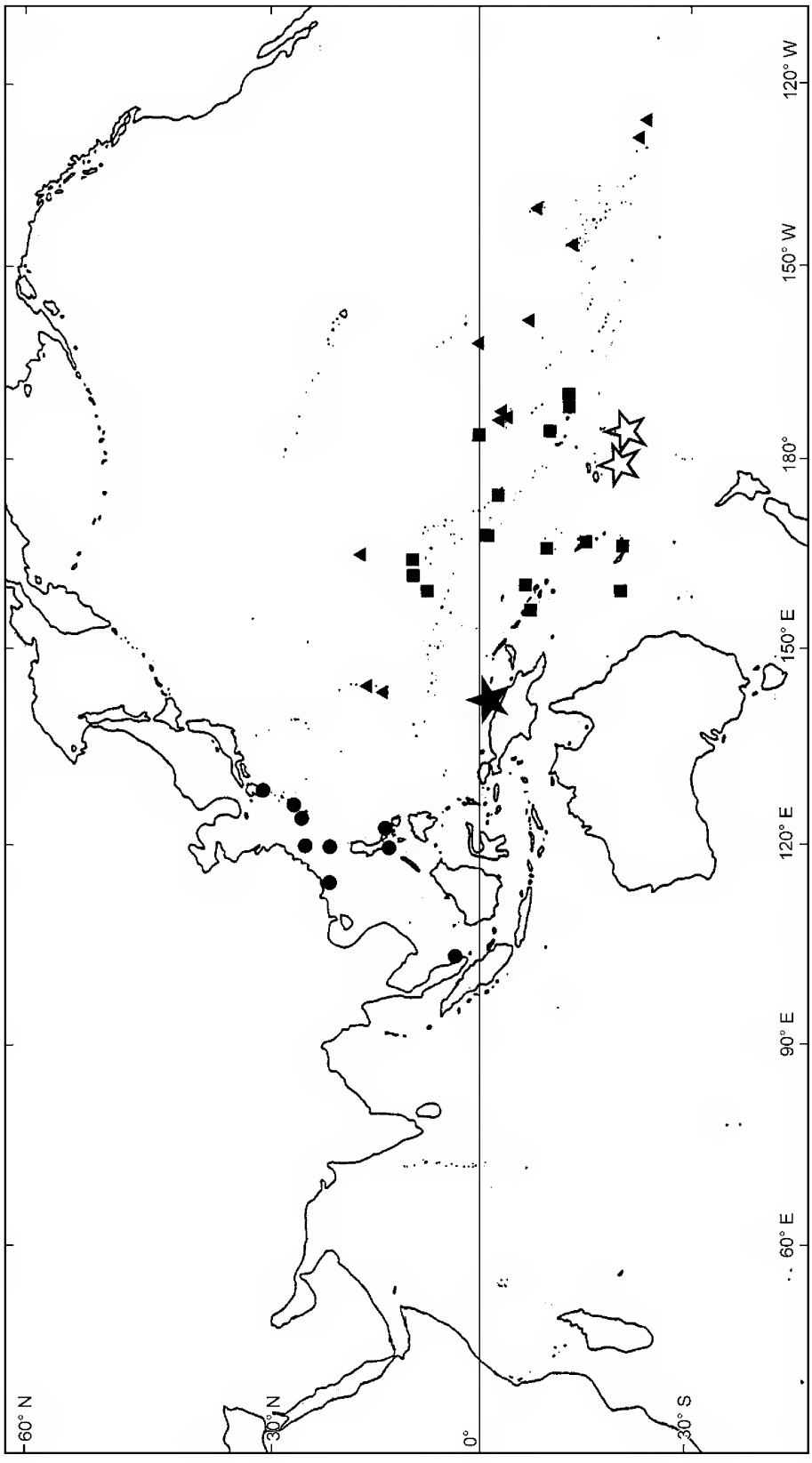
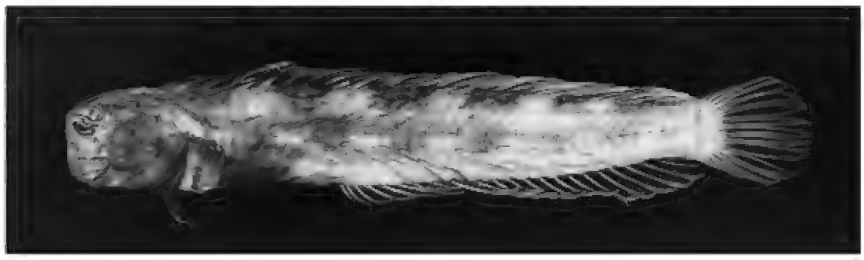


Fig. 10. Geographical distribution of the species of the genus *Rhabdoblennius*. – *R. nigropunctatus* n. sp. (☆), *R. nitidus* (●), *R. papuensis* n. sp. (★), *R. rhabdotrachelus* (▲), *R. snowi* (■).



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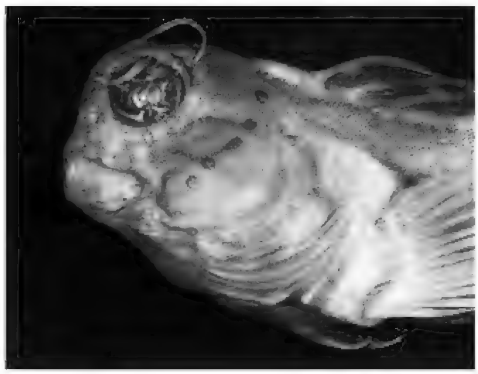

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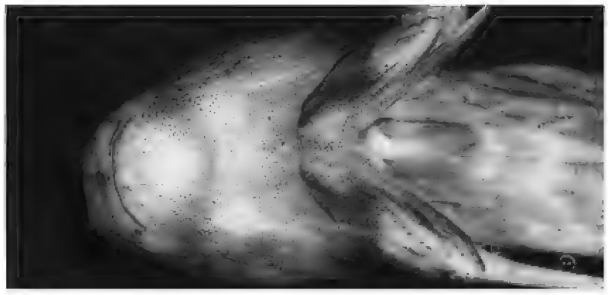

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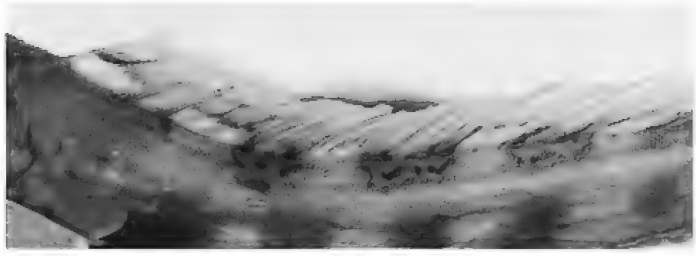

D

Fig. 11. *Rhabdoblennius nitidus*. – **A**. USNM 226737, male, 54.8 mm SL, Philippines. Lateral view. – **B**. USNM 226737, male, 43.3 mm SL, Philippines. Lateral view of head showing the characteristic spots. – **C–D**. SB uncat., male, 37.8 mm SL, Ryukyu Islands. **C**. Head, ventral view. **D**. Lateral view of sides of body and dorsal fin, showing characteristic spots.

imens), 21 (59 specimens), 22 (15 specimens), 23 (1 specimen)]. Caudal fin with 13 segmented rays, central 9 rays branched; dorsal procurrent rays 6–7, ventral procurrent rays 4–6. Pectoral fin rays 14. Mandibular part of the preoperculo-mandibular canal (see Fig. 6) with 4 pores. Mid-dorsal supratemporal pores 3–5 [frequency distribution of 21 specimens: 3 (18 specimens), 4 (2 specimens), 5 (1 specimen)] (Fig. 7). Pores of the head lateral line canal 68–88 (average 77.9 in 21 specimens).

Colour in alcohol: Head brownish grey, lower side of body whitish. Sides of head with 2–11 dark spots, the largest with a light centre (in 61 specimens examined for this character, 33 % have 6 spots) (Fig. 11B). Diameter of spots up to one third of pupil diameter. The spots are situated on the posterior margin of the orbit, dorsally between the orbits and the preopercle, and on the upper half of the opercle. A small, short, brownish band between the anteroventral margin of the orbit and the upper margin of the upper lip. A plain dark band situated in the mid of the anterior side of the head above the lower margin of the upper lip. Lower side of the body with a plain angular or oblique dark band between the corners of the mouth (Fig. 11C). Lower half of the pectoral fin base with a wide, whitish band, which is bordered by a dark streak running across the bases of the pectoral fin rays. The posterior dark border of the white streak forms a triangular dark area anteriorly, reaching to below the branchial opening and ventrally to the pelvic fin rays. Pectoral fin rays and membranes plain white. Sides of body with a row of 7 dark blotches reaching down to ventral third of body. Blotches vaguely joining on the back, reaching to the base of the dorsal fin (Fig. 11A). Short, irregular blackish lines between the dorsal fin and the lateral blotches, some extending on the dorsal fin (Fig. 11D). Dorsal fin with 3 horizontal rows of light, oval spots with a narrow dark margin. Membranes of spiny part of dorsal fin with two or three oblique, irregular, partly confluent dark blotches, with small, light, oval spots in between. Membranes of soft part of dorsal fin with oblique rows of rhomboidal blotches. Anal fin basally light, distally with diffuse pigmentation. Caudal fin membranes with dark blotches and light or transparent oval spots in between (Fig. 11A).

Distribution

Coast of southern Japan (Masuda et al. 1984); Ryukyu Islands; Taiwan; China (Günther 1861); Philippines (Batanes, Luzon, Mindoro); Malaysia (Tioman) (Fig. 10).

Remarks

Günther (1861: 243) described his *Salarias nitidus* as follows:

"D. 33. A. 2+22. V. 2.

The height of the body equals the length of the head, and is six times and a half in the total. The forehead projects slightly beyond the snout. A canine tooth in the lower jaw, none in the upper. A slender simple tentacle above each orbit, a small one at the nostril, none on the neck. The dorsal fin is not notched, commences above the operculum and terminates immediately before the caudal; it is lower than the body, but somewhat higher than the anal. Yellowish (in spirits), with eight brown cross-bands; head and body with pearl-coloured, purple-edged dots, those of the head in small number and round, those of the body more numerous and oblong. Dorsal fin with brown spots, continued from the bands of the body to the basal half of the fin; the marginal half with two series of white dots. Caudal with four transverse series of white dots. Anal transparent, immaculate, or with a series of white dots along its base.

Chinese Sea.

a–c. China. Presented by Captain Sir E. BELCHER, C. B.
d. From the Haslar Collection.
Total length ..... 23 lines
Length of the head ..... 3 1/2 lines
Height of the body ..... 3 1/2 lines"

This excellent and detailed original description of the species, and X-ray photographs of the syntypes of *Blennius nitidus* Günther, 1861, well agree with *Blennius ellipes* Jordan & Starks, 1906, and show that *B. nitidus* is the senior synonym of *B. ellipes*.

An additional specimen (BMNH 1874.11.19.48) was collected by J. D. E. SCHMELTZ at 'Bonham Island', named *Blennius nitidus*. There is no information about the body colouration available. The locality Bonham Island (now part of the Marshall Islands) can be excluded for *R. nitidus*. In case the locality is correct, the specimen is probably based on *R. snowi*.

3.2.3 *Rhabdoblennius papuensis* **n. sp.** (Fig. 12, Tab. 4)

Material

Total: 19 specimens.
Holotype. **Papua New Guinea**: USNM 293104, male, 38.8 mm SL; Ninigo Islands, Meman Island, mid-east shore, 1°12′40″S 144°16′59″E, 0–1.2 m depth; V. G. SPRINGER et al.; 27 Oct. 1978.
Paratypes. **Papua New Guinea**: BPBM 39304, 1 male, 34.8 mm SL; same data as the holotype. – SMNS 23502, 1 male, 34.3 mm SL; same data as the holotype. – USNM 373497, 8 males (20.4–38.8 mm SL) and 8 females (23.0–32.5 mm SL); same data as the holotype.

Tab. 4. *Rhabdoblennius papuensis* n. sp.; measurements (in mm) and counts of the type series. – HT = holotype; PT = paratype; Eye = eye diameter; SO = supraorbital tentacle length.

Type status	Catalogue number	Sex	TL	SL	Head length	Eye	SO	D	A	P_1
HT	USNM 293104	Male	46.4	38.8	8.4	2.3	2.0	XII, 18	II, 21	14/14
PT	USNM 373497	Male	46.5	38.7	8.6	2.3	2.0	XII, 19	II, 21	14/14
PT	BPBM 39304	Male	40.8	34.8	8.3	2.0	1.8	XII, 18	II, 21	14/14
PT	USNM 373497	Male	41.8	35.0	7.8	2.5	1.7	XII, 18	II, 21	14/14
PT	SMNS 23502	Male	40.7	34.3	7.7	2.3	1.3	XII, 19	II, 20	14/14
PT	USNM 373497	Male	39.9	33.7	7.7	2.2	1.7	XII, 18	II, 21	14/14
PT	USNM 373497	Male	36.6	30.2	6.8	2.0	1.6	XII, 19	II, 22	14/14
PT	USNM 373497	Male	36.6	30.8	7.1	2.0	1.4	XII, 18	II, 20	14/14
PT	USNM 373497	Male	32.9	27.3	6.0	1.9	0.8	XII, 19	II, 21	14/14
PT	USNM 373497	Male	26.0	21.3	5.4	1.7	1.3	XII, 19	II, 21	14/14
PT	USNM 373497	Male	24.5	20.4	5.0	1.7	1.2	XII, 19	II, 21	14/14
PT	USNM 373497	Female	39.0	32.5	7.8	2.4	1.3	XI, 19	II, 21	14/14
PT	USNM 373497	Female	38.5	32.5	7.6	2.3	1.7	XII, 18	II, 20	14/14
PT	USNM 373497	Female	35.4	29.6	6.5	2.2	1.6	XII, 19	II, 21	14/14
PT	USNM 373497	Female	34.0	28.0	7.0	2.0	1.6	XII, 18	II, 20	14/14
PT	USNM 373497	Female	34.7	29.6	6.8	2.0	1.7	XI, 19	II, 20	14/14
PT	USNM 373497	Female	31.7	27.3	6.5	2.0	1.3	XII, 19	II, 20	14/14
PT	USNM 373497	Female	29.6	24.7	6.3	2.0	1.1	XII, 19	II, 20	14/14
PT	USNM 373497	Female	27.4	23.0	6.3	2.0	1.4	XII, 18	II, 19	14/14

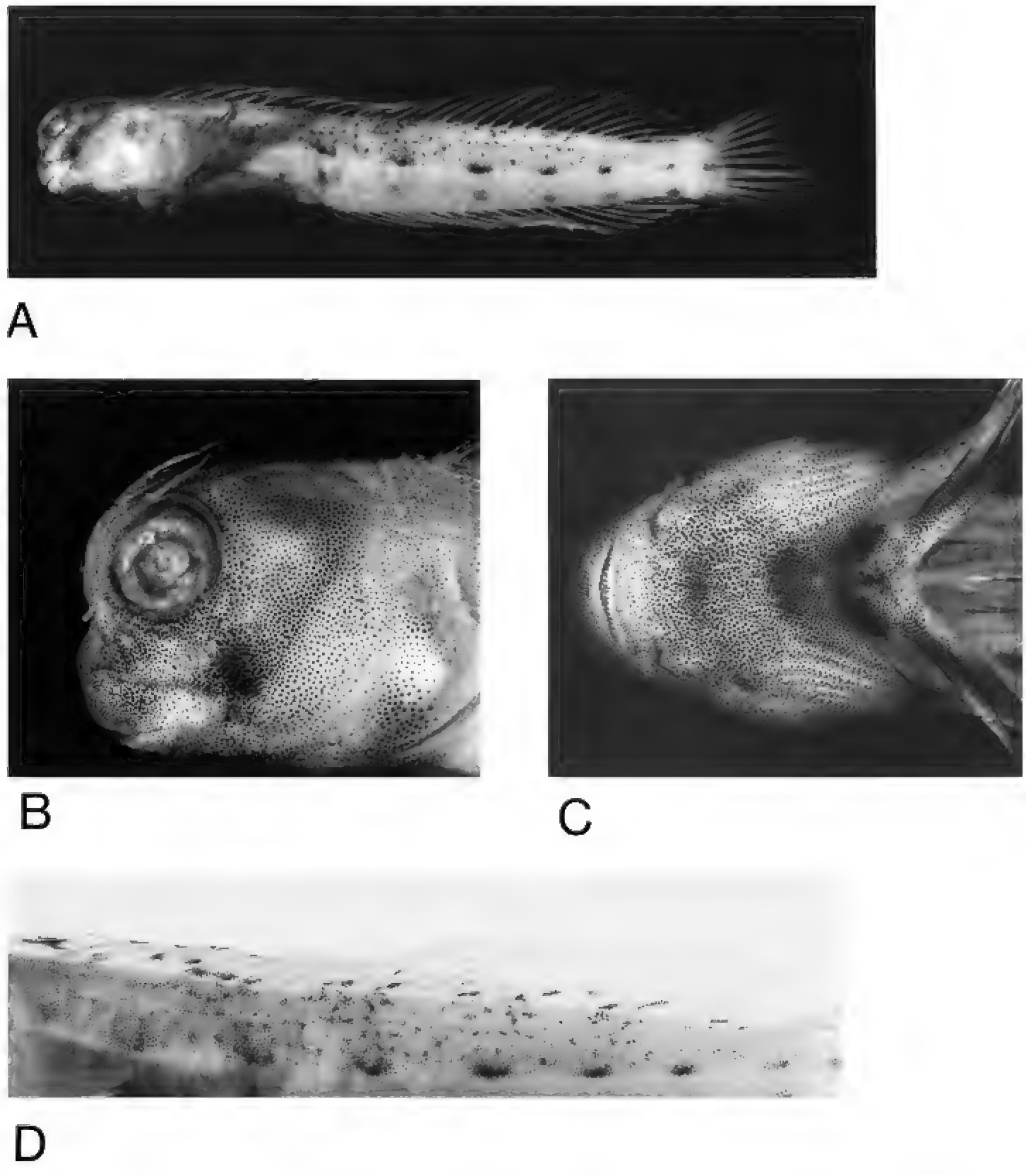

Fig. 12. *Rhabdoblennius papuensis* n. sp., holotype, USNM 293104, male, 38.8 mm SL, Papua New Guinea. **A**. Lateral view. **B**. Head, lateral view. **C**. Head, ventral view. **D**. Lateral view of upper left body side and dorsal fin.

Etymology

The name "*papuensis*" refers to the type locality, Ninigo Islands, part of the territory of Papua New Guinea.

Diagnosis

A species of the genus *Rhabdoblennius* with 18–19 segmented dorsal fin rays and (19-)20–21(-22) segmented anal fin rays. Pelvic fin with 3 segmented rays. Supraorbital tentacle simple, fusiform, shorter than eye diameter. Head with dark pigmentation, with a deep dark area between the central cheeks, the upper orbital rim and the

corner of the mouth. Snout and central three-fifths of the upper lip dark, other parts light. Lower sides of head with dark pigmentation, darkest in the central part of the anterior half. Central part of posterior half of lower sides of head with a transversely oval, black blotch, its size about half eye diameter. Pelvic fin base black directly behind the opercular membrane (Fig. 12A). Sides of body with a row of 7 dark, longitudinal, oval blotches with an even darker centre.

Description

Premaxillary teeth 50–54, dentary teeth 30–36. Vomerine teeth 2–4.

Dorsal fin spines 12 (rarely 11), segmented fin rays 18–19. Dorsal fin deeply incised between spinous and soft portions (by one-third to half of dorsal fin height). Anal fin spines 2, segmented anal fin rays (19–)20–21(–22). Caudal fin with 13 segmented rays, central 9 rays branched. Pectoral fin rays 14. Supraorbital cirrus shorter than eye diameter.

Mandibular part of preoperculo-mandibular canal (see Fig. 6) with 4 pores. Middorsal supratemporal pores 3 (see Fig. 7). Lateral head canal with 71–75 pores (average of 10 specimens: 73.1).

Colour in alcohol: Head and body light yellowish brown. Head with dark pigmentation and an intense dark area between the central cheek, posterior orbital rim and corner of mouth (where it is darkest) (Fig. 12B). Opercular region with scattered, darker pigmentation. Snout between anterior, lower orbital rim and lower margin of upper lip with scattered dark pigmentation. Outer one-fifth of upper lip light. Lower side of head with dark pigmentation, especially centrally in the anterior half (Fig. 12C). Posterior half centrally with a transversely oval, black blotch that equals half orbit diameter. Pelvic fin base with black pigmentation directly behind the opercular membrane. Basal two-thirds of first and distal two-thirds of second segmented pelvic fin ray with black pigmentation (Fig. 12A). Lower side of head in juveniles usually light, with faint pigmentation. Sides of body with a row of 7 vague, round to longitudinal-oval blotches with a dark centre (Fig. 12A). A smaller, dark spot below each blotch. Dorsal one-third of body with scattered dark spots (Fig. 12D). Membranes on basal half of dorsal fin with irregular, small, longitudinal or longitudinal-oval, blackish spots, which are more closely set on the segmented portion of the dorsal fin. Distal portion of unsegmented part of dorsal fin with a narrow dark margin. Pectoral fin base and pectoral fin rays plain light, translucent, without pigmentation. Distal two-thirds of anal fin membranes with faint grey pigmentation. Caudal fin base with a small central dark spot. Caudal fin membranes blackish, with transverse rows of light, translucent spots. The lower 3 segmented caudal fin rays with dark pigmentation.

Distribution

Papua New Guinea (Ninigo Islands) (Fig. 10).

3.2.4 *Rhabdoblennius rhabdotrachelus* (Fowler & Ball, 1924) (Fig. 13)

Blennius rhabdotrachelus Fowler & Ball, 1924; Fowler & Ball 1924: 272–273 (Wake Island; holotype: BPBM 3419).

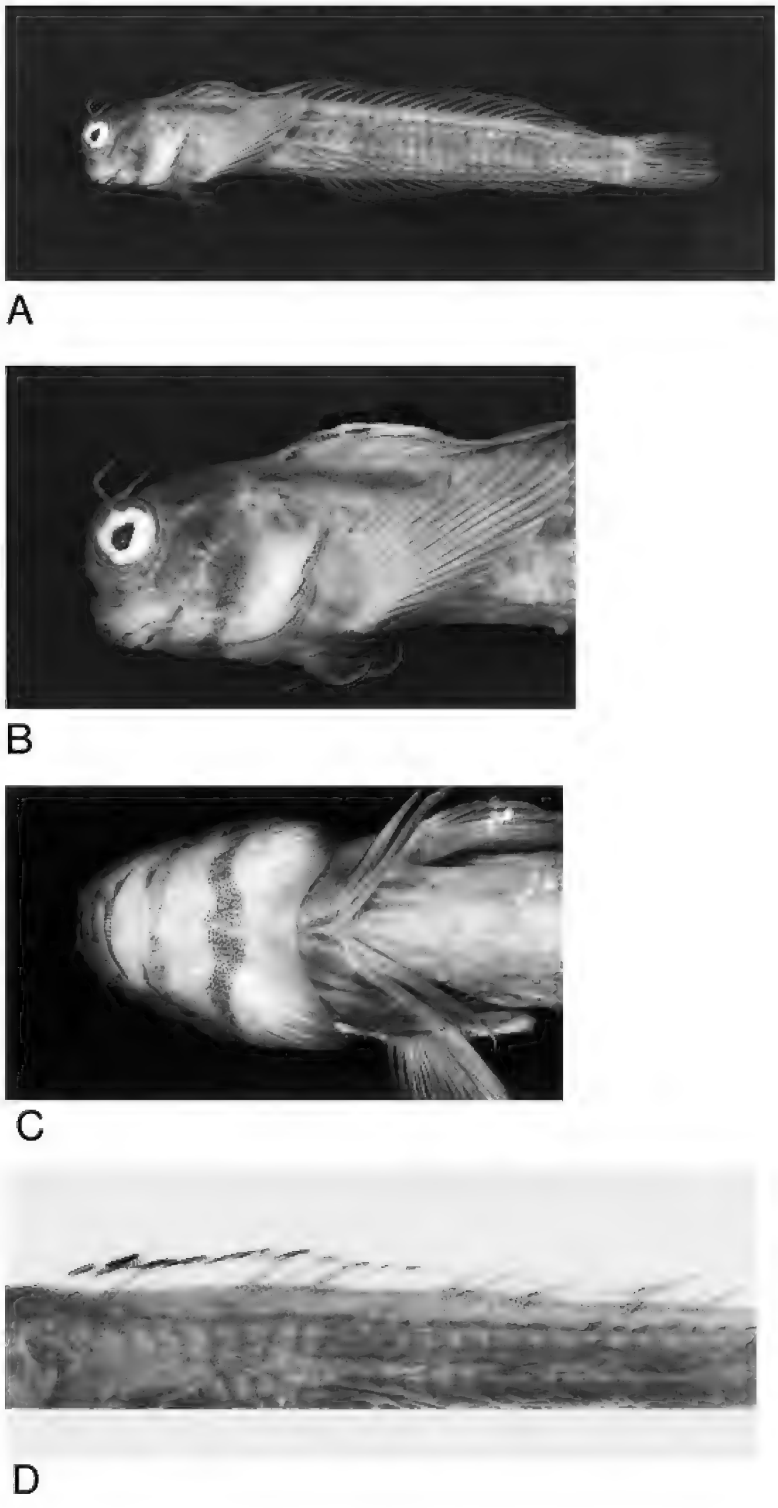

Fig. 13. *Rhabdoblennius rhabdotrachelus*. – **A–C**. USNM 115509, male, 41.2 mm SL, Kiribati, Phoenix Islands. **A**. Lateral view. **B**. Head, lateral view. **C**. Head, ventral view. – **D**. USNM 115509, male, 33.7 mm SL, Kiribati, Phoenix Islands. Lateral view of side of body and dorsal fin.

Material

Total 64 specimens.

Guam: USNM 123937, 11 males (20.7–33.6 mm SL) and 10 females (21.4–35.5 mm SL) (out of 31 specimens); Ritidian Point; M. H. MARKLEY; 12 July 1945. – USNM 124094, 3 males (23.2–30.7 mm SL) (including X-ray radiographs); Amantes Point; L. P. MCELROY; 11 June 1945. — **Commonwealth of the Northern Marianas**: USNM 123852, 1 female, 28.0 mm SL; Saipan; T. D. WHITE & F. B. SHROYER; June 1945. — **Wake Island**: BPBM 3419, holotype of *Blennius rhabdotrachelus* Fowler & Ball. — **Jarvis Island**: USNM 293109, 1 specimen, X-ray radiograph. — **Kiribati, Phoenix Islands**: USNM 115509, 20 males (30.3–43.6 mm SL) and 12 females (31.6–39.7 mm SL); Enderbury Island; L. P. SCHULTZ; 15–19 May 1939. — **Cook Islands**: USNM 200608, 3 males (26.3–33.9 mm SL) (out of 6 specimens); Penrhyn (Tongareva Atoll), NW corner of atoll, in 2nd channel N of Molokai Island, 1–2 feet depth; L. N. HUBER; 13 June 1965. — **Tuamotu Archipelago**: USNM 300400, 2 males (X-ray radiographs) (out of 3 specimens); Rangiroa Atoll, 1 mile E of Tiputa, large tide-pool open to sea, 1–10 feet depth; J. MAGNUSON & H. YUEN, RV 'C. H. Gilbert', Cruise 54; 1 Nov. 1961.

Description

Premaxillary teeth 40–52, dentary teeth 20–32. Vomerine teeth 2–3 (usually 2). Vertebrae 10 + 26–28.

Dorsal fin spines 12, segmented soft rays 18–19 [frequency distribution of 62 specimens: 18 (22 specimens), 19 (40 specimens)]. Dorsal fin deeply incised (one-third to half) between spinous and rayed portions. Anal fin spines 2, segmented rays 20–22 [frequency distribution of 62 specimens: 20 (21 specimens), 21 (38 specimens), 22 (3 specimens)]. Caudal fin with 13 segmented rays, central 9 rays branched; dorsal procurrent rays 6–7, ventral procurrent rays 5–6. Pectoral fin rays 14. Supraorbital cirrus shorter than eye diameter. Mandibular part of the preoperculo-mandibular canal (see Fig. 6) with 3 pores. Mid-dorsal supratemporal pores 6–15 (usually 6–8) (see Fig. 7). Pores in the lateral head canal 90–114 (average of 12 specimens: 103.8).

Colour in alcohol: Head and body light brown. Head with a broad, dark band running from the anteroventral margin of the orbit to the tip of the upper lip (Fig. 13B). Another dark band extending from the posterior margin of the orbit to the corner of the mouth. A third, slightly narrower, curved dark band extending ventrally across the throat between the margins of the lower lip (Fig. 13C). A relatively wide dark band reaches from the central preopercular region across the thorax to the opposite side. A narrow dark streak at the corner of the branchiostegal membrane, not extending onto the lower side of the head. Dark bands on the lower sides of the head not angular. Anterior three-fifths to full width of upper lip dark. Sides of body with a row of 7 dark blotches, which are larger on the upper half of the body, reaching dorsally to the dorsal fin base (Fig. 13A). The first blotch is situated below the pectoral fin rays; its width equals the eye diameter. The last, smallest blotch is situated on the posterior caudal peduncle. A row of small, spot-like pigment cells along the dorsal fin base (Fig. 13D). Central part of spinous dorsal fin with a longitudinal dark band, which usually starts between the 1st and 2nd dorsal fin spines, decreasing in width posteriorly. Soft part of dorsal fin with narrow, dark streaks along the fin rays. Pectoral fin base brown, pectoral fin rays pale, membranes translucent. Distal half of pelvic fin brown. Anal fin with a distal dark margin. Caudal fin with dark upper and lower margins; central-basal part of caudal fin with a small dark spot.

Distribution

Guam; Commonwealth of the Northern Marianas (Saipan); Wake Island; Jarvis Island; Kiribati, Phoenix Islands (Enderbury, Canton, Hull); Cook Islands (Penrhyn); Tuamotu Archipelago (Rangiroa); Marquesas Islands; Pitcairn Group (Henderson, Ducie) (Fig. 10).

Remarks

SCHULTZ (1943: 270) recorded this species under the name *Blennius rhabdotrachelus* (part) from Enderbury, Canton and Hull (Kiribati, Phoenix Islands); his material from American Samoa was based on *R. snowi*. This species was recorded by REHDER & RANDALL (1975: 24) from Ducie/Pitcairn Group, by RANDALL (1985: 477) from the Marquesas Islands, and by IRVING et al. (1995: 338) from Henderson/Pitcairn Group.

3.2.5 *Rhabdoblennius snowi* (Fowler, 1928) (Fig. 14)

Blennius snowi Fowler, 1928; FOWLER 1928: 431, fig. 71 (Strong's Island/Kosrae, Caroline Islands; holotype: MCZ 3634).

Salarias walensis Herre, 1935; HERRE 1935: 437 (Wala Island, New Hebrides/Vanuatu; holotype: FMNH 17393).

Material

Total: 103 specimens.

Marshall Islands: USNM 142135, 6 males (30.2–38.0 mm SL) and 6 females (27.8–46.5 mm SL); Bikini Atoll, Enyu Island, reef at entrance just inside lagoon; L. P. SCHULTZ et al.; 16 Mar. 1946. — **Nauru**: SMNS 4110, 1 specimen; A. KRÄMER; 1899. – SMNS 4130, 3 specimens; A. KRÄMER; 1899. — **Kiribati, Gilbert Islands**: USNM 167326, 12 specimens (X-ray radiographs); Onotoa, reef on W side, lagoon side of reef; J. E. RANDALL; 21 Aug. 1951. — **Baker Island**: USNM 204634, 1 male (40.7 mm SL) and 2 females (31.7–37.4 mm SL); reef at SE corner of island, 0°14′N 176°28′W; F. E. SIBLEY; 15 Oct. 1964. — **Solomon Islands**: USNM 195790, 1 male, 22.3 mm SL; New Georgia Island, Munda Reef; W. M. CHAPMAN; 12 May 1944. – USNM 201842, 1 female, 28.0 mm SL; New Georgia Island, Munda Reef; W. M. CHAPMAN; 12 May 1944. – USNM 293113, 1 male, 20.3 mm SL; New Georgia Island, Munda Reef; W. M. CHAPMAN; 12 May 1944. – USNM 357218, 10 males (35.0–48.5 mm SL) and 8 females (26.9–40.3 mm SL); Santa Cruz Islands, Tomotu Island, coral surge channel on NW coast just S of Neo Village, 10°40′S 165°47′30″E, 0–10 m depth; J. T. WILLIAMS et al.; 29 Sep. 1998. – USNM 357545, 1 male, 33.1 mm SL; Stewart Islands, reef flat on W side of Matuiloto Island, 8°23′S 162°52′30″E, 0–1 m depth; J. T. WILLIAMS et al.; 2 Oct. 1998. – USNM 357873, 2 males (42.2–50.3 mm SL); Santa Cruz Islands, Ndendo Island, Nemya Bay, on N end of the bay at anchorage on coral and rock bottom in surge zone, 10°48′30″S 165°50′E, 0–10 m depth; J. T. WILLIAMS et al.; 27 Sep. 1998. — **Vanuatu**: USNM 315305, 5 males (18.3–26.3 mm SL) and 1 female (34.5 mm SL); Éfaté Island, Pango Peninsula, British bathing Beach; R. H. SNIDER; 15 Nov. 1964. – USNM 359586, 1 male, 26.8 mm SL; Éfaté Island, SE side of island, at white sands, 17°49′23″S 168°25″E, 0–3 feet depth; J. T. WILLIAMS, D. S. SMITH & M. A. MCGROUTHER; 6 May 1997. – USNM 359587, 6 males (23.9–49.8 mm SL) and 5 females (20.0–44.8 mm SL); Éfaté Island, SE side of island, at white sands, 17°49′23″S 168°25″E, 0–3 feet depth; J. T. WILLIAMS, D. S. SMITH & M. A. MCGROUTHER; 6 May 1997. — **New Caledonia**: SMNS 18260, 1 specimen; Touaourou, 6 km SE Yaté, Grande Terre, 22°10′36″S 166°57′51″E, 0.1–1.0 m depth; R. FRICKE; 25 July 1996. — **American Samoa**: USNM 115504, 15 males (23.0–53.0 mm SL) and 15 females (23.0–39.0 mm SL); Swains Island, reef; L. P. SCHULTZ; 3–9 May 1939.

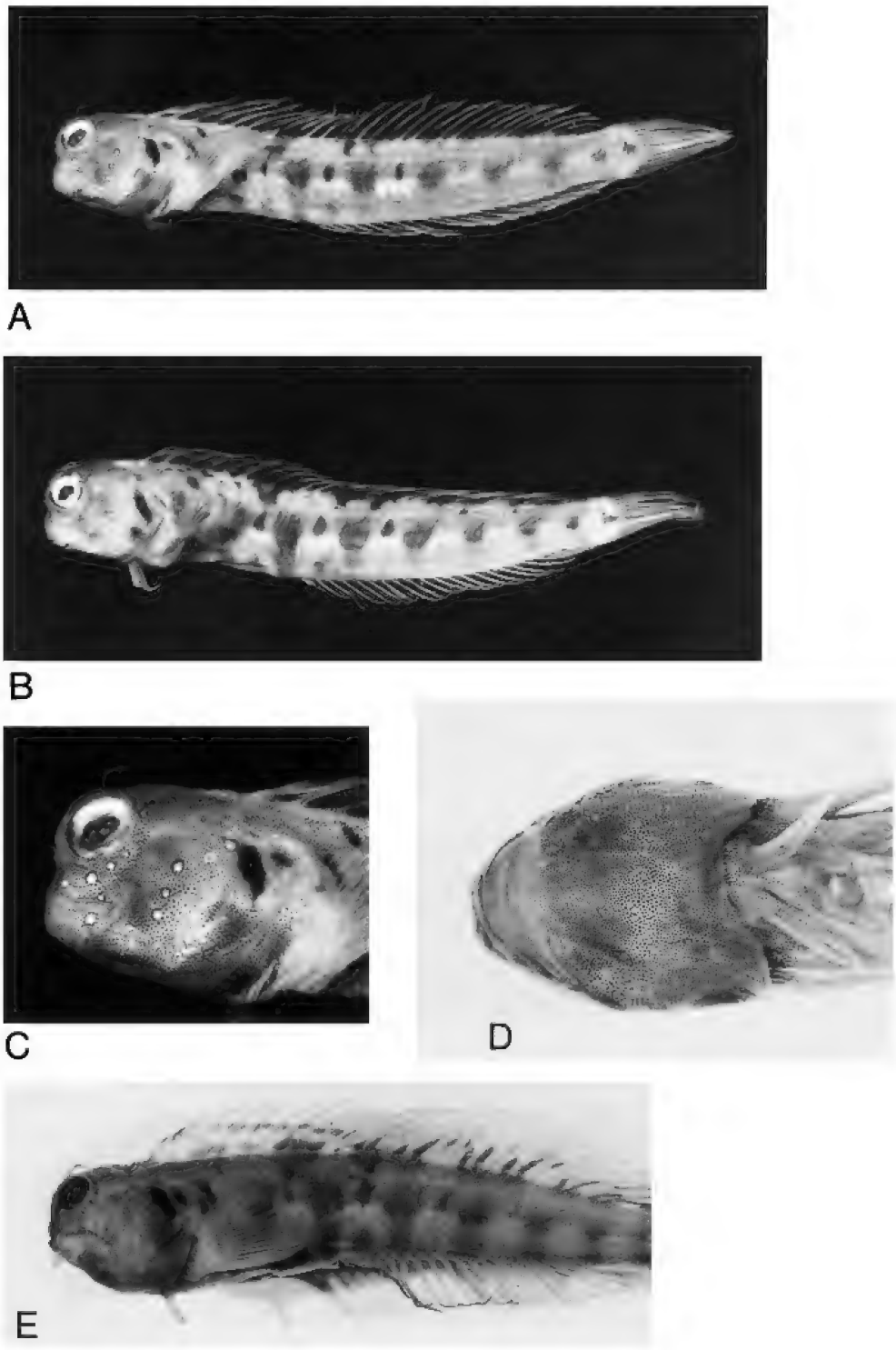

Fig. 14. *Rhabdoblennius snowi*. – **A**. USNM 142135, male, 37.0 mm SL, Marshall Islands. Lateral view. – **B**. USNM 142135, female, 37.6 mm SL, Marshall Islands. Lateral view. – **C**. USNM 142135, male, 37.0 mm SL, Marshall Islands. Head, lateral view. – **D–E**. USNM 359787, male, 47.8 mm SL, Vanuatu. **D**. Head, ventral view. **E**. Lateral view of left sides of body and dorsal fin.

Description

Premaxillary teeth 48–56, dentary teeth 26–44. Vomerine teeth 2–4 (all specimens from Santa Cruz Islands, Solomon Islands in USNM 357218 have 4 vomerine teeth). Vertebrae 10 + 26–28.

Dorsal fin spines 11–12 [frequency distribution of 82 specimens: 11 (1 specimen), 12 (81 specimens)]. Segmented dorsal fin rays 17–19 [frequency distribution of 82 specimens: 17 (5 specimens), 18 (25 specimens), 19 (52 specimens)]. Dorsal fin deeply incised between the spinous and soft portions (by one-third to half of fin). Anal fin spines 2; segmented anal fin rays 19–21 [frequency distribution of 71 specimens: 19 (2 specimens), 20 (47 specimens), 22 (22 specimens)]. Caudal fin with 13 segmented rays, central 9 rays branched; dorsal procurrent rays 6–7, ventral procurrent rays 5–7. Pectoral fin rays 14. In 15 specimens examined from Vanuatu, the supraorbital cirrus is longer than eye diameter in 4 of 6 males and in 1 of 9 females; in 20 specimens from the Solomon Islands, it is longer than eye diameter in 12 of 14 males and in 1 of 6 females; and in each of 30 specimens from Samoa (15 males, 15 females), the cirrus is shorter than eye diameter.

Mandibular part of the preoperculo-mandibular canal (see Fig. 6) with 4 pores. Mid-dorsal supratemporal pores 3 (see Fig. 7). Lateral head canal with 69–82 pores (average of 23 specimens: 74.4).

Colour in alcohol: Head and body light yellowish brown. Anterior snout, upper lip and lower sides of head with large, diffusely arranged pigment cells, which are closest set on the central throat. Sides of head, preopercle, postorbital, occasionally also snout and upper lip with large, light ocelli (with dark margin) of irregular size (including similar small round to oval blotches), at maximum one third of pupil diameter (Figs. 14C, 14D). Anterior part of body sometimes with scattered small, round or oval, light ocelli. Upper half of opercle with a large, oblique black blotch, which ventrally extends into densely set, small, diffuse pigment cells. Dark pigmentation extends from above the pectoral fin base to the pelvic fin base. Sides of body with a row of 7 round, dark blotches (Figs. 14A, 14B). The first blotch, which is smaller and darker than the others, is situated above the pectoral fin base. Each of the blotches with 1–2 narrow, dark streaks extending to the dorsal fin base, and a slightly wider streak extending to the anal fin base. The upper streaks usually connected with an irregular, dark spot on the dorsal fin base. Between each pair of the 1st to 4th blotches is a small, supralateral, black blotch. Central part of the spiny dorsal fin with a narrow, horizontal, dark streak across spines and membranes (Fig. 14E). The streak is approximately extending ventrally to the base of the 10th spine. Membranes of the soft portion of the dorsal fin with oblique streaks which partially extend across the membranes only, partially across membranes and fin rays. Anal fin with a distal dark margin. Pectoral and pelvic fins pale. Membranes of ventral half of caudal fin with 4–5 vertical rows of light, translucent spots. Membranes of dorsal half of caudal fin plain pale.

Distribution

Marshall Islands (Bikini, Rongelap, Enewetak); Nauru; Kiribati, Gilbert Islands (Onotoa); Baker Island; Solomon Islands (Stewart Islands, New Georgia, Santa Cruz Islands); Chesterfield Islands; New Caledonia (Grande Terre); Vanuatu (Éfaté); American Samoa (Swains, Rose, Tau) (Fig. 10).

Remarks

This species is also recorded from Enewetak Atoll/Marshall Islands (based on SMNS 16536, 1 specimen, from Mui Island), and from Rongelap Atoll (SMNS 16537, 2 specimens, from Tufa Island).

SCHULTZ (1943: 270) described this species from Swains, Rose and Tau (American Samoa) under the name *Blennius rhabdotrachelus*. KULBICKI et al. (1994: 33) found it at the Chesterfield Islands and recorded it under the name *Rhabdoblennius ellipes*.

4 Key to the species of *Rhabdoblennius*

1 Head lateral line system: Mandibular part of preoperculo-mandibular canal (Fig. 6) with 3 pores; mid-dorsal supratemporal pores 6–15 (usually 6–8) (Fig. 7); lower sides of head with a broad transverse black band across thorax; throat with another transverse dark band between the corners of the mouth; lower sides of head without isolated spots; supraorbital cirrus usually shorter than eye diameter; sensory pores of head lateral line system 90–114 (mean 103.8) ..... ***R. rhabdotrachelus***

– Head lateral line system: Mandibular part of preoperculo-mandibular canal with 4 pores; mid-dorsal supratemporal pores 3–5 (usually 3); head colouration different; supraorbital cirrus variable; sensory pores of head lateral line system 68–88 ..... **2**

2 Head with dark pigmentation, including an intense dark area between cheeks, orbital rim, and corner of mouth; diffuse dark blotch on thorax; sides of head without isolated spots; supraorbital cirrus smaller than eye diameter; [sensory pores of head lateral line system 71–75 (mean 73.1)] ..... ***R. papuensis* n. sp.**

– Head colouration different; sensory pores of head lateral line system 68–88 ..... **3**

3 Head with 2–11 irregularly sized spots at posterior orbital rim, between orbit and preopercle, and on upper opercle, size of the spots up to one third pupil diameter, the larger spots with a light centre; anterior throat with an angular to oblique dark streak; sides of body with 7 dark blotches; below dorsal fin base irregular, short, blackish lines, some extending onto the dorsal fin base; sides of body with 3 longitudinal rows of small, lighter, longitudinal-oval spots with a narrow, dark margin; [sensory pores of head lateral line system 68–88 (mean 77.9)] ..... ***R. nitidus***

– Head and body colouration different; [sensory pores of head lateral line system 69–82] **4**

4 Preopercle, postorbital, occasionally also snout and upper lip with irregular large, light spots with dark margin, maximum size one-third pupil diameter; upper half of opercle with a large, oblique, dark blotch; anterior part of pectoral fin base with a dark band; sides of body with a row of 7 round, dark blotches; between the 1st to 4th dark blotches a smaller black spot each; [sensory pores of head lateral line system 69–82 (mean 74.4)] .... ***R. snowi***

– Sides of head with black spots of irregular size, intensity and arrangement; opercle often with 3 large, black blotches; centre of head spots not light; transverse rows of small, black spots on upper lip, often with spots and narrow, black lines above; throat dark; upper anterior half of body with round to oval, black spots varying in intensity, number and arrangement; [sensory pores of head lateral line system 70–77 (mean 73.4)] .... ***R. nigropunctatus* n. sp.**

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Manuscript received: 7.VI.2004, accepted: 24.VIII.2004.

ISSN 0341-0145

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Schriftleitung: Dr. Hans-Peter Tschorsnig, Rosenstein 1, 70191 Stuttgart
Gesamtherstellung: Gulde-Druck GmbH, 72072 Tübingen